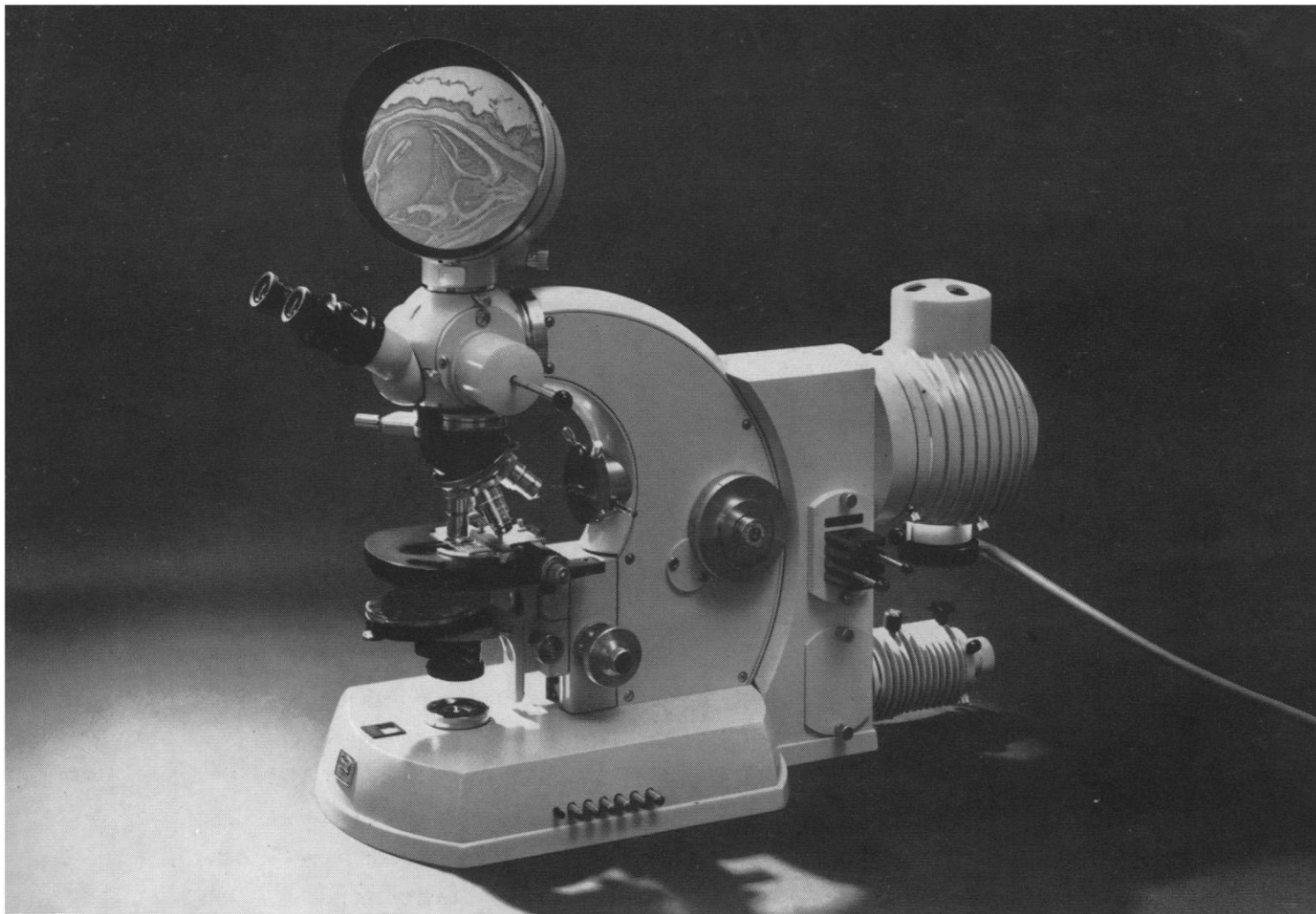


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8 May 1970

Vol. 168, No. 3932

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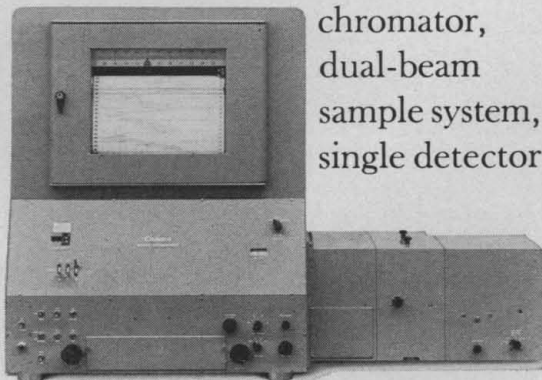
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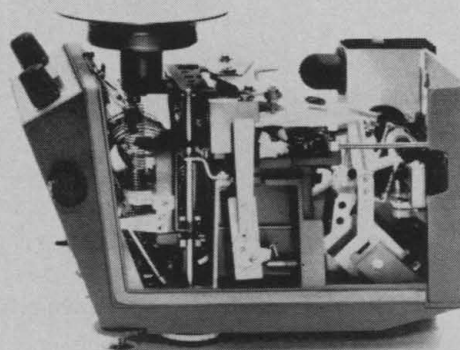
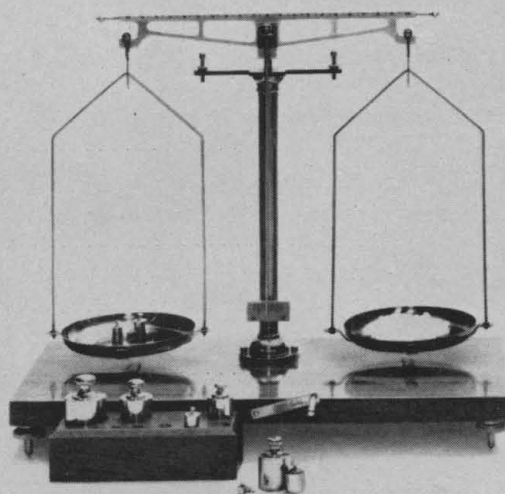
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COVER

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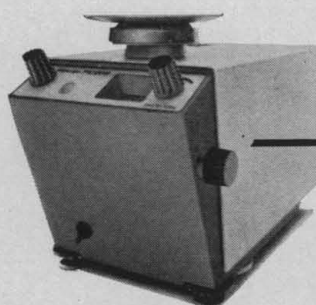
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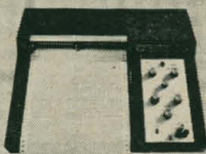
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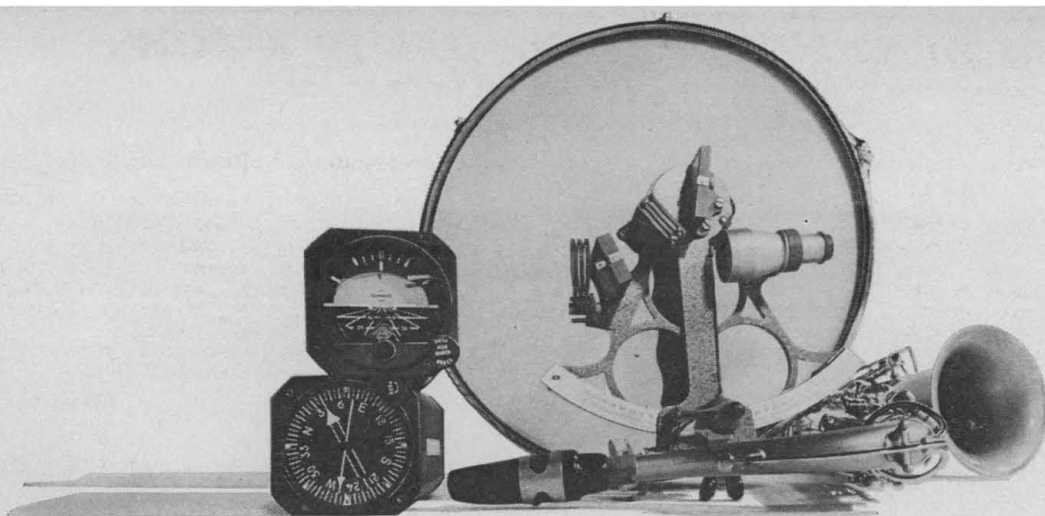
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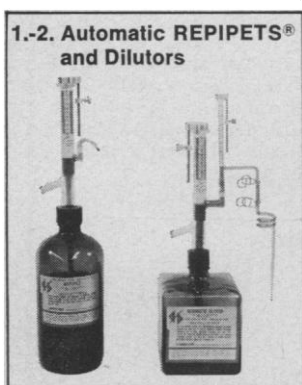
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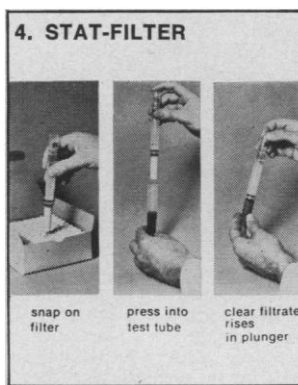
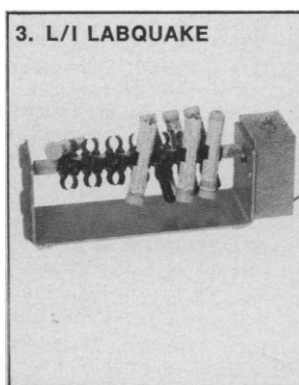


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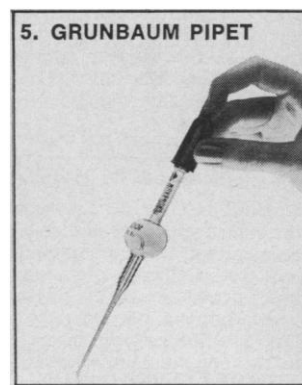
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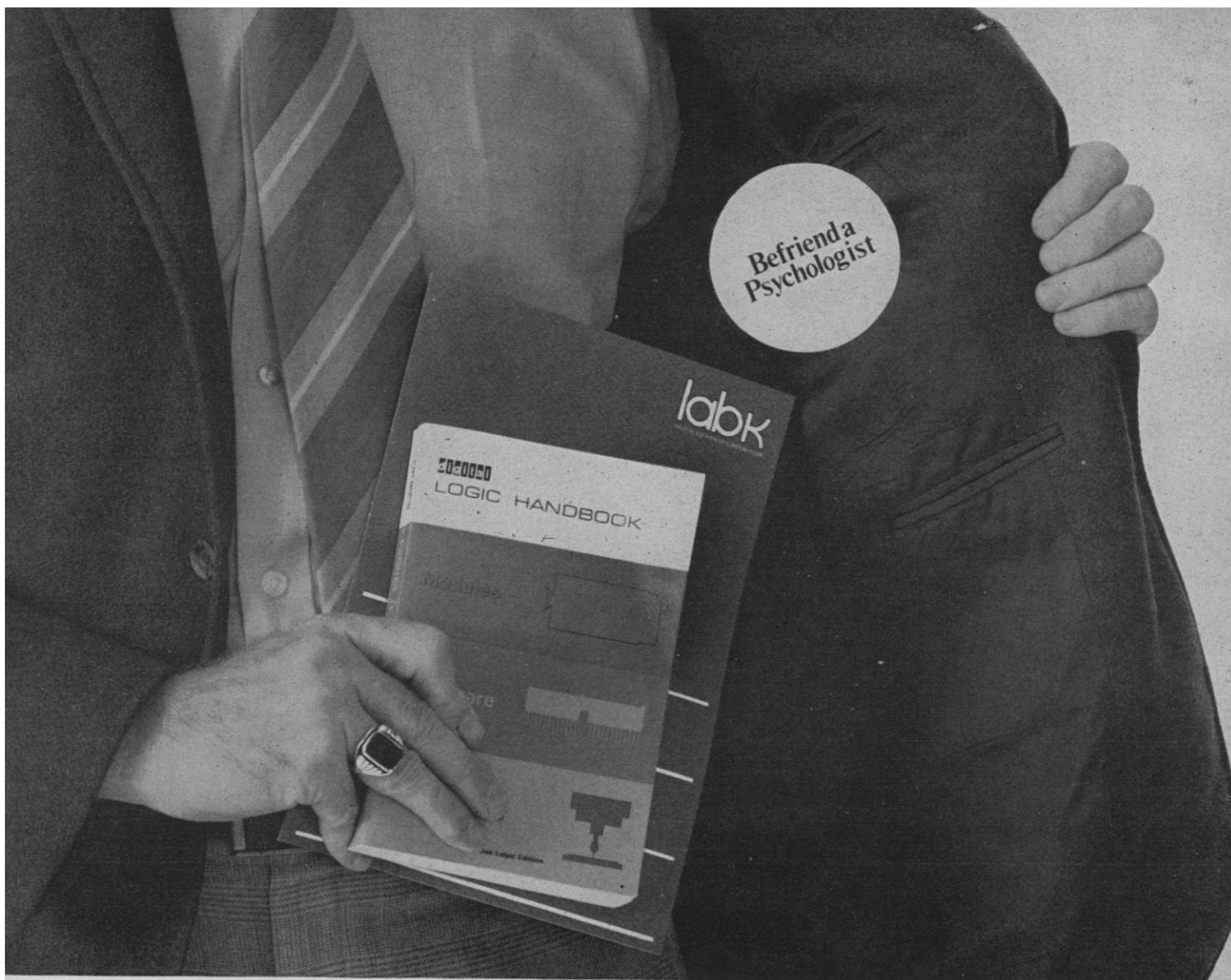
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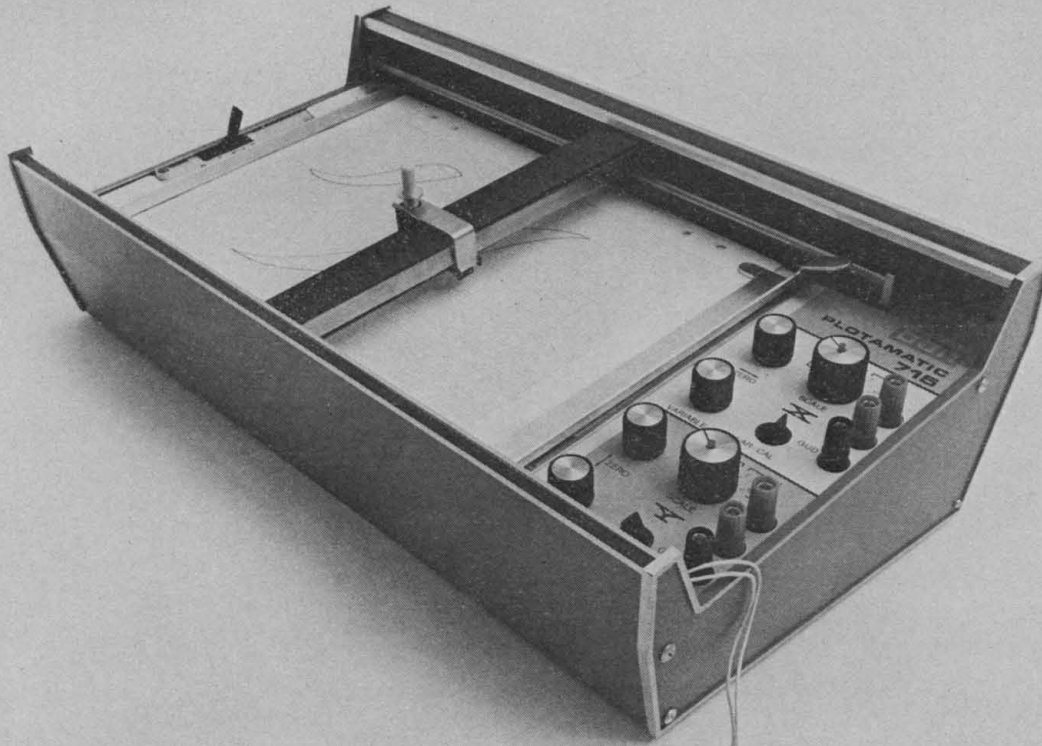
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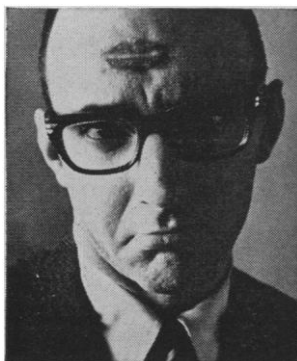


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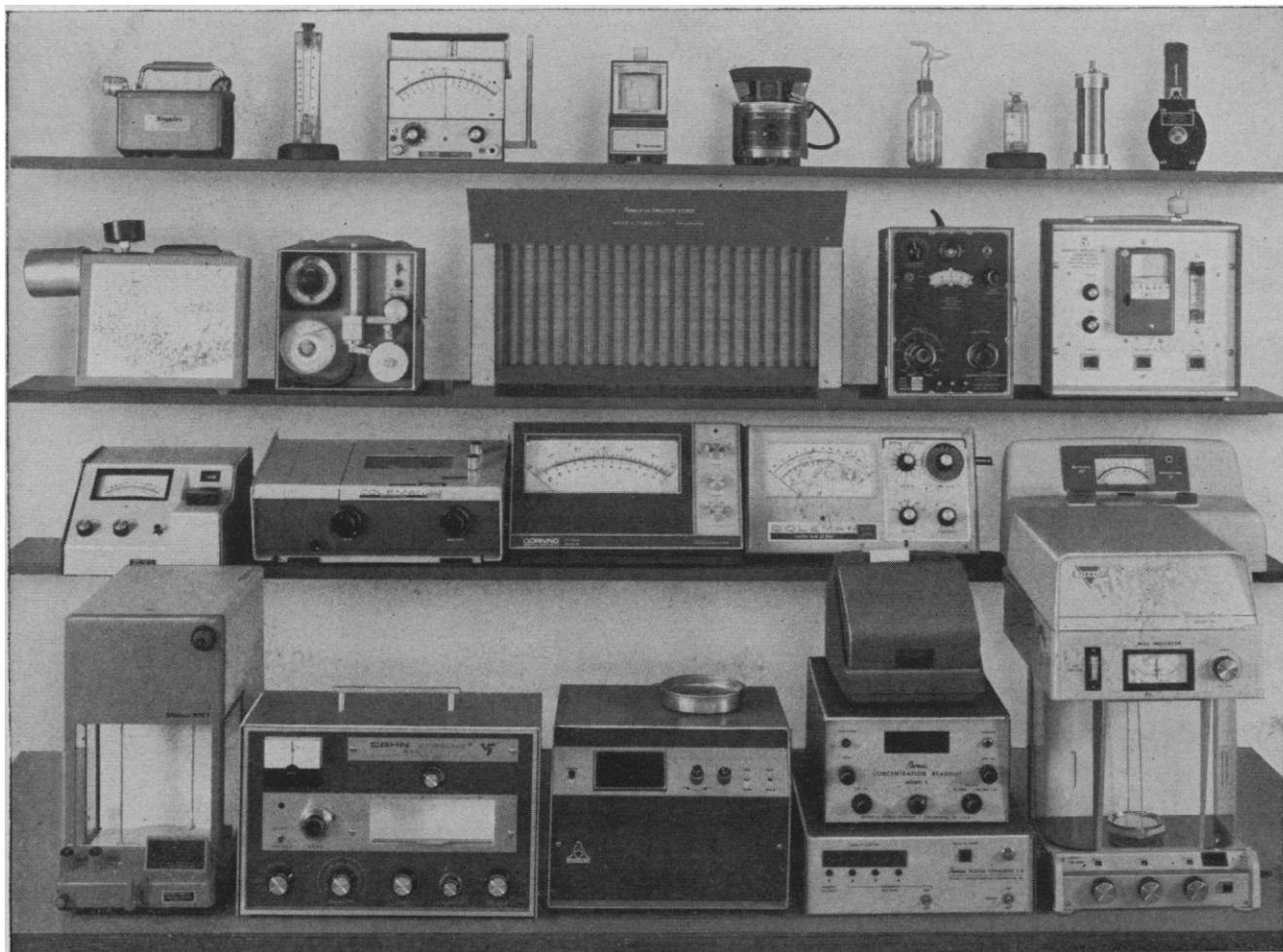
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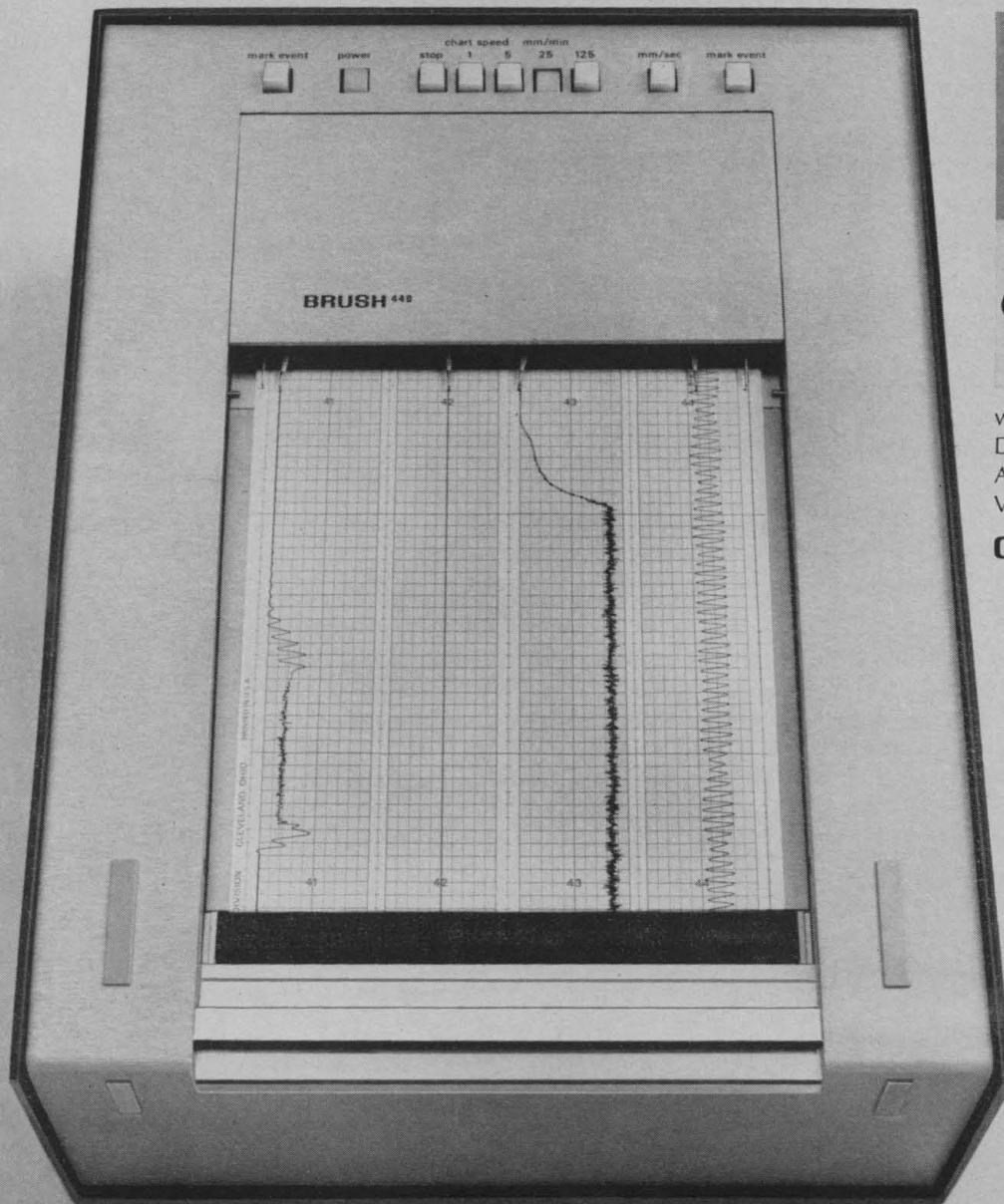
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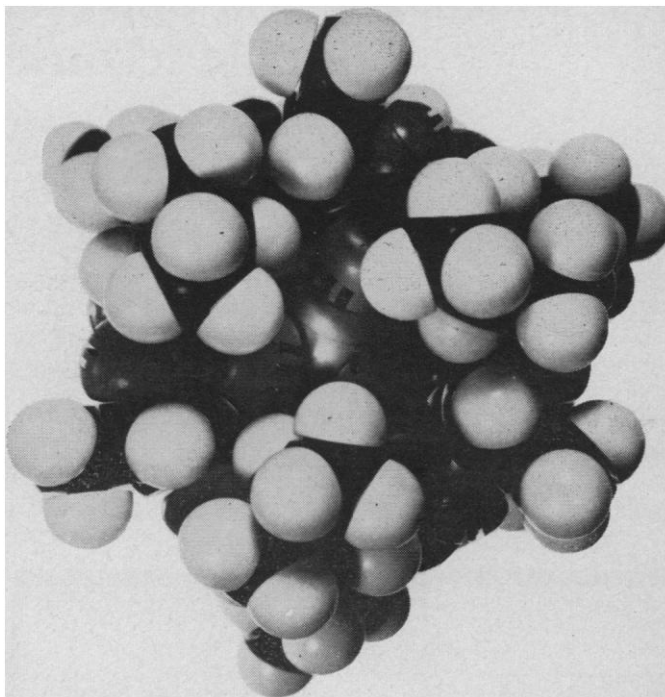


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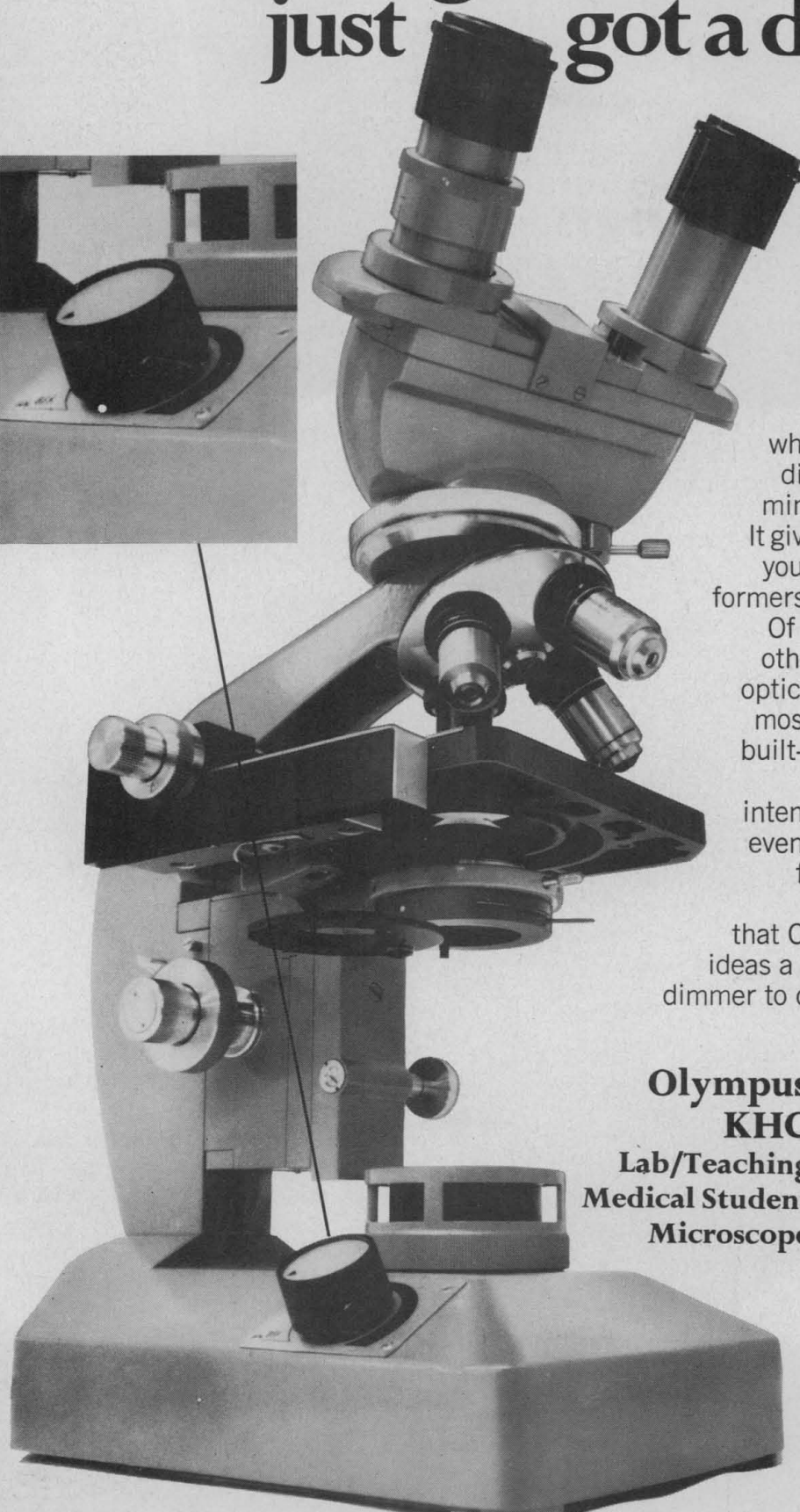
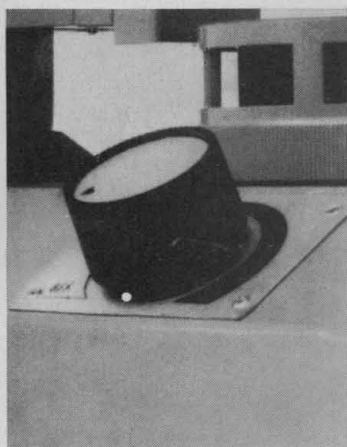
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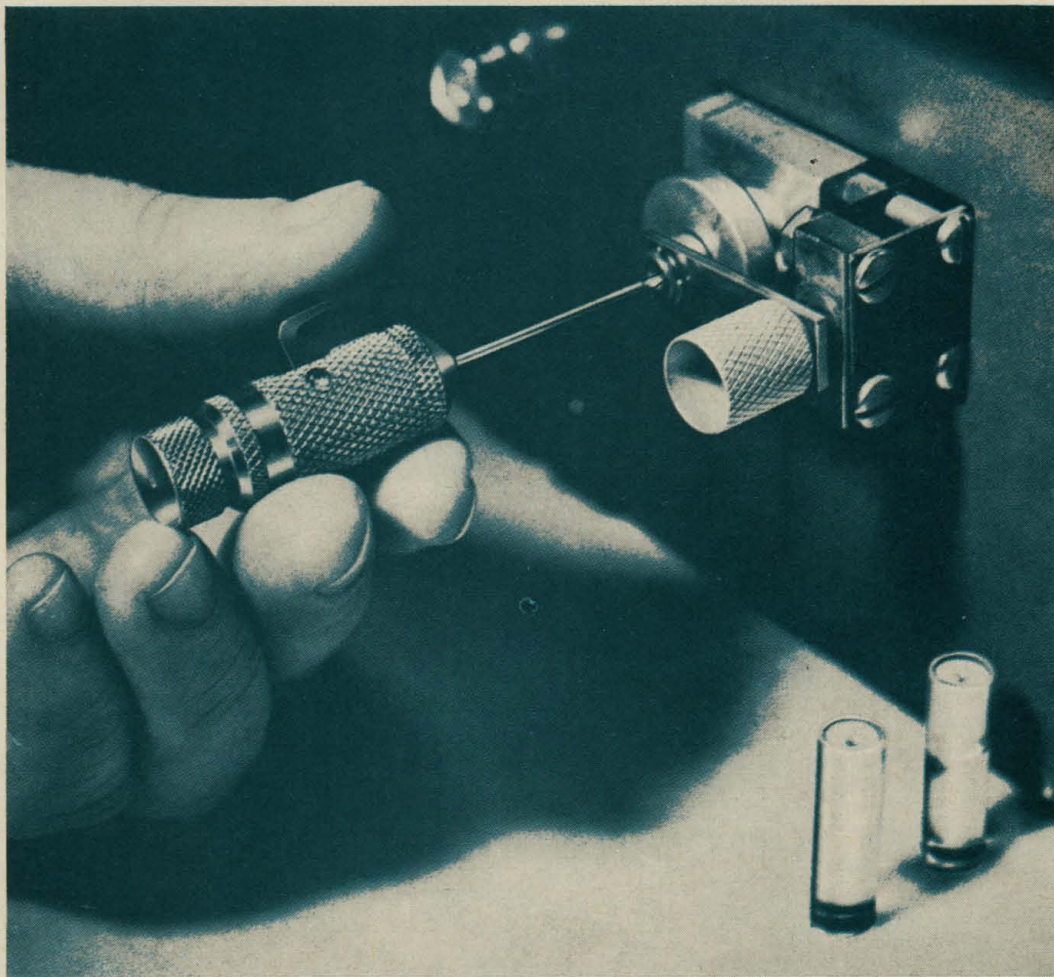
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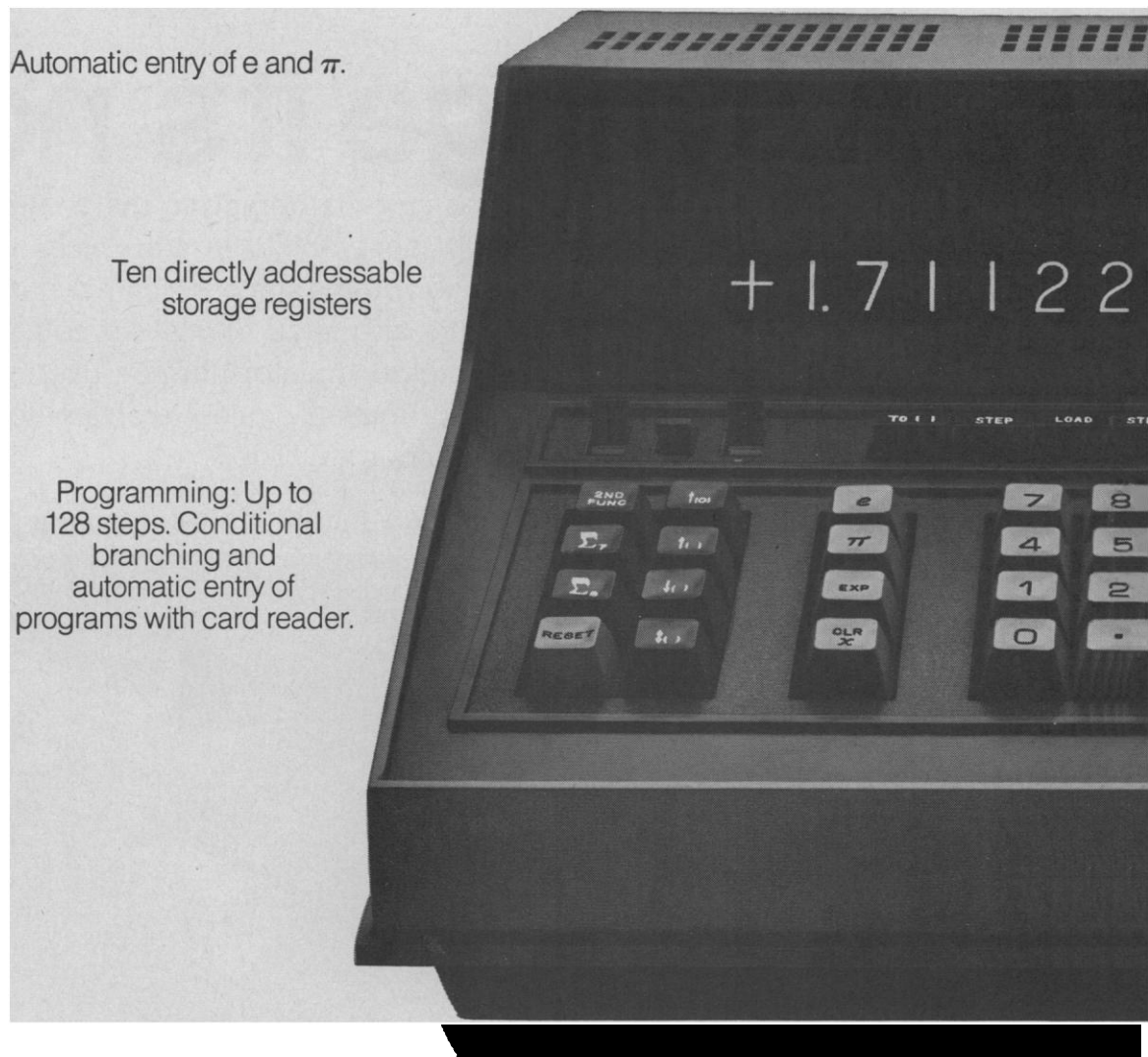
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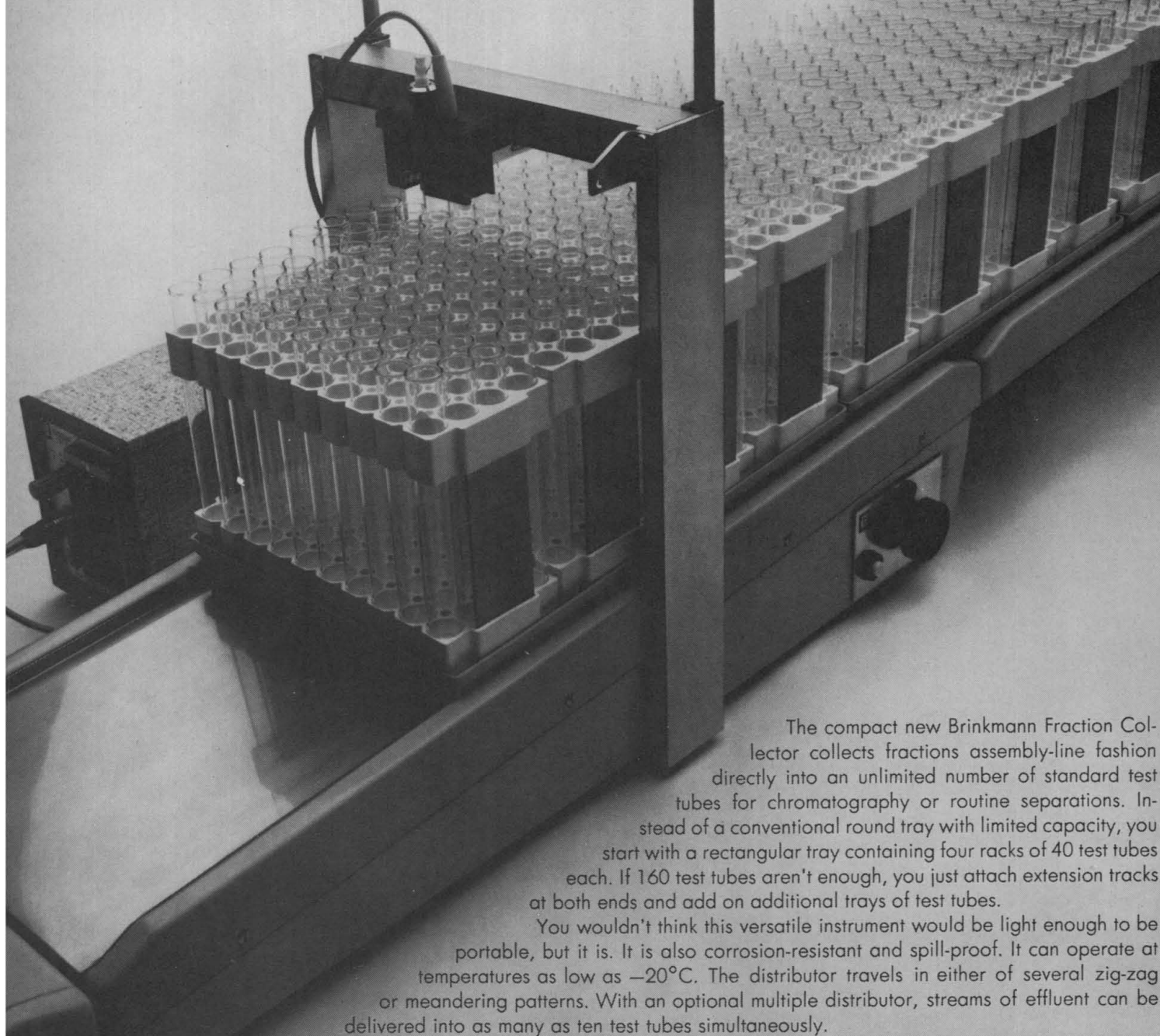


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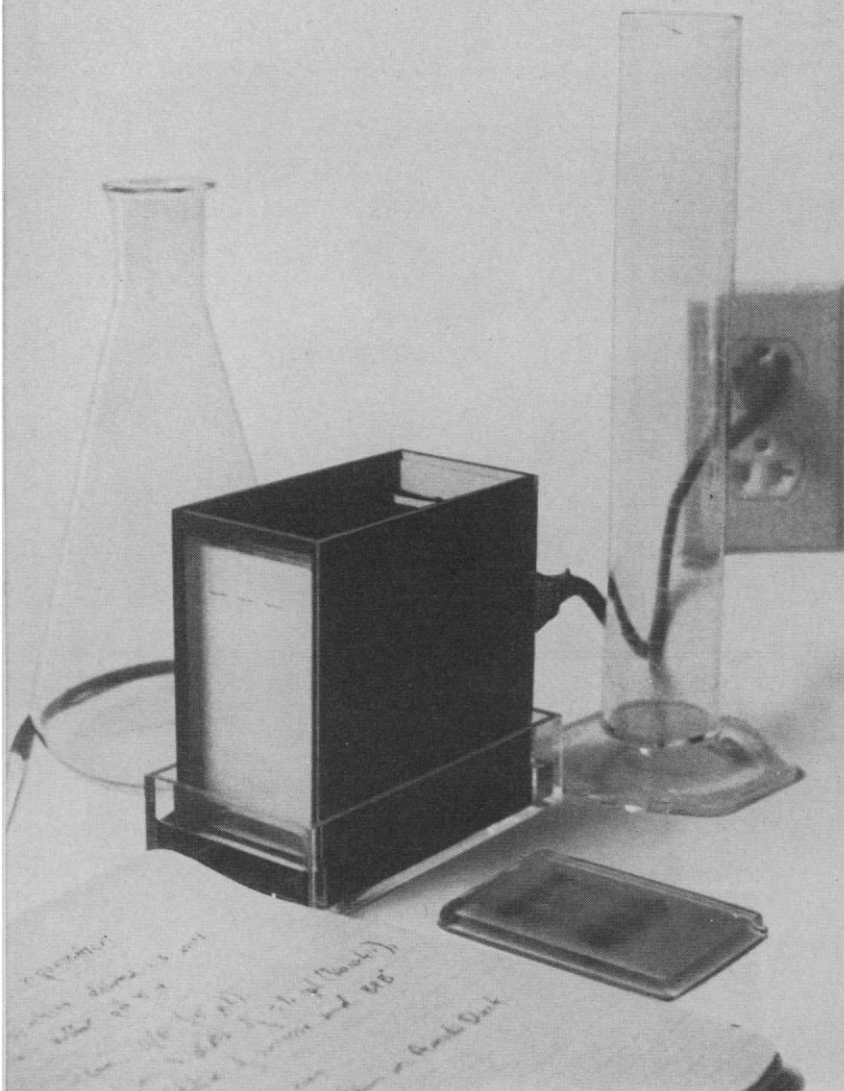
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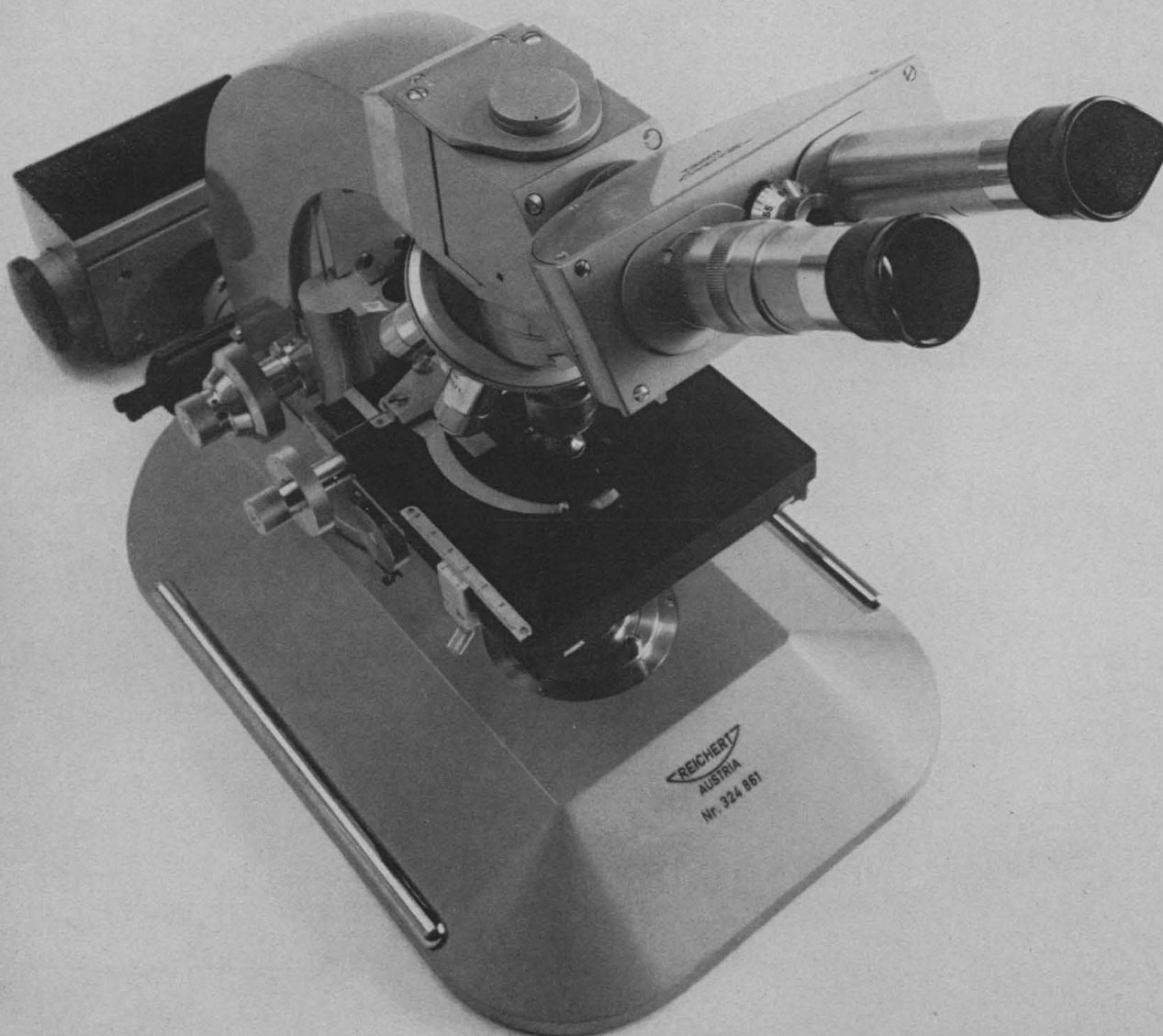
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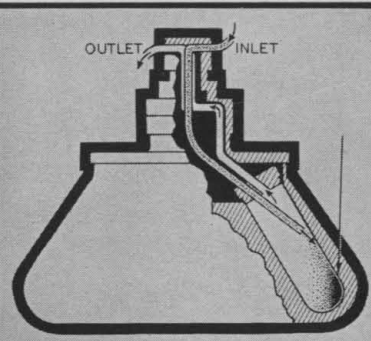


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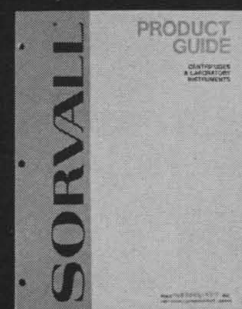
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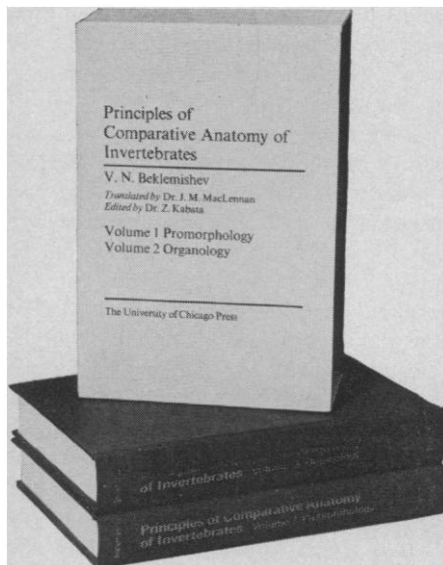


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serve in official advisory capacities. We urge that they not hide behind a smoke-screen of technical expertise in order to deny the general public a significant role in situations where the public has a clear right to have its views heard and respected. In addition we want to state our strong condemnation of the type of irresponsible and gratuitous disregard for the public exhibited by a fellow scientist in just such a situation. We feel that scientists' disrespect for the public can only increase the public's disrespect for the scientist.

WILLIAM LOCKERETZ*

Division of Engineering and Applied Sciences, Harvard University, Cambridge, Massachusetts 02138

* This letter was also signed by six graduate students in the department of environmental science and engineering.

The Aspiring Eronaut†

I yearn not soon to reach the Moon
Or tread the plains of Mars.
I would not go from Earth below
To soar among the stars.
But could I hale a comet's tail
Into the nearby void,
It would be great to gravitate
Upon an asteroid.
My mate and I would cleave the sky
Beyond this earthly moss,
And sail from here to Eros' sphere,
A dozen miles across;
And we'd explore that little core
Without a tie or tether,
And lightly leap like mountain sheep,
My mate and I together.
Then, should we yearn for our return,
We'd turn our capsule round
With but a push—and, with a whoosh,
We'd soon be homeward bound.
Ah, when I tire of love's sweet fire
And joys of Earth have cloyed,
I'd spin my days—my waning phase—
On Eros' asteroid.

RALPH A. LEWIN

Scripps Institution of Oceanography, P.O. Box 109, La Jolla, California 92038

† Inspired by "Mission to an asteroid" by H. Alfvén and G. Arrhenius (9 Jan., p. 139).

Bettelheim's Essay on Youth

Many of the points of Eisenberg's "Student unrest: Sources and consequences" (27 Mar., p. 1688) and more were cogently made in "Obsolete youth," an essay by the University of Chicago's famed psychiatrist Bruno Bettelheim which was published in last September's *Encounter*. This thoughtful piece, subtitled "Towards a psycho-

graph of adolescent rebellion," has become something of a celebrity: it has been translated into several languages and has attracted the attention of concerned academics the world over. At the urging of a group of Berkeley faculty members, it has been published in the United States as a 50-cent paperback by San Francisco Press, 255 12th Street, San Francisco, California 94103.

CHARLES SÜSSKIND

College of Engineering, University of California, Berkeley 94720

The Scramble for Census Data

The 1970 census currently being taken will yield, for the first time, massive data which will be issued by the government in a form suitable for processing by machine. The Bureau of the Census plans to issue over 2000 tapes containing far more information than found in any previously published census tables. For example, the sample census counts will contain over 10,000 items of information for each of the 35,000 census tracts in the United States. The purchase of all these tapes would cost about \$120,000, and processing them just once on any large third-generation computer would probably cost a third to a half that much.

It is perfectly clear that to achieve widespread utilization the census should be issued in a more highly condensed and usable format, preferably without any sacrifice of information. A preliminary review suggests that condensations by a factor of 8 to 15 can be achieved immediately. Later in the decade mass storage capabilities will have been greatly improved and expanded, and random or partially random access to files of this size may be commonplace. Also, a number of useful abstractions of the file across all tracts or counties into units of one or two reels of tape can be devised. Finally, there will be many innovations in the utilization of the geographic aspect of the census files and in the combination of census data with data from other sources.

In spite of limited funds, the Census Bureau must satisfy a wide variety of users, and this situation complicates efforts to reorganize the files effectively and efficiently. Most university users and private consultants in this field serve local, state, or regional areas that would use only a small portion of these massive files by providing



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special tabulations and services to meet these limited needs. But no government or private agency is yet prepared to make available to numerous universities a full range of census data in condensed form for direct use on campus.

There are serious economic difficulties involved in supplying this data. The cost of providing the first set of tapes in condensed form might be one-half million dollars, but the cost of the next set of tapes would be closer to \$25,000. No commercial venture can undertake such a conversion without a guaranteed market. It would appear that this kind of one-time assistance to nationwide research is an appropriate government or foundation activity. Undoubtedly similar examples of this nature have arisen in other scientific fields, and we would appreciate hearing from readers of *Science* how they have been solved or what has happened when they have not been solved.

BRITTON HARRIS

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CHARLES L. LEVEN

Institute for Urban and Regional Studies, Washington University, St. Louis, Missouri 63130

Drug Deceptions

I hope the comment by Cheek, Newell, and Joffe ("Deceptions in the illicit drug market," 27 Feb., p. 1276) receives widespread coverage and that many individuals who are tempted to use illegal drugs will read it. The results of the Cheek-Joffe study, and of the Toronto study they cite, are in accord with a recent study I reported involving 12 different tablets and capsules purchased in the Haight-Ashbury district of San Francisco (1). These substances were all described as "LSD" by their sellers and were supposed to contain 250 micrograms of the chemical. Of the 12 capsules and tablets described as containing 250 micrograms of LSD, one contained no LSD at all. Most of the others contained very small quantities of LSD (2, 7, or 26 micrograms). Some of the tablets contained more STP (2,5-dimethoxy-4-methylamphetamine) than LSD. Only two samples contained over 150 micrograms of LSD—a tablet described as "Owsley Little Purple" (180 micrograms) and one described as "Owsley White Lightning" (222 micrograms).

A lengthy and discouraging account of the economics of black market LSD sales can be found in *Bulletin 28*, published by the Psychedelic Information Center, 26 Boylston Street (Apt. 3), Cambridge, Massachusetts 02138.

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Reference

1. This study will be published in a 1970 issue of the *Journal of Psychedelic Drugs*. Although the black market LSD was collected in late 1967, and analyzed at that time, it was impossible to publish the results until this year. It is likely that the quality of these drugs has further deteriorated since the 12 samples were purchased.

Name Names!

Whalen (Letters, 6 Mar.) does a service to the scientific community by calling to our attention the rather frequent practice of multiple publication of the same data in more than one journal article, but he leaves the discussion on the level of generalities. If the evidence were published, wouldn't such exposure do the necessary cleansing job? If Whalen has the name of an offending author and supporting references, why not print them in *Science*? If other readers of the literature would do likewise, *Science* could publish a periodic list of offending authors and this practice should disappear in a few years. Why prolong this stream of theoretical abuses?

GERALD M. WEINBERG
School of Advanced Technology,
State University of New York
at Binghamton, Binghamton 13901

Whalen did not state the dates of these three publications—whether they were immediately consecutive, simultaneous, or widely spaced. The last category of publishing is my concern. I have in my files articles written by a so-called authority, published at approximately 5-year intervals, which reiterate, restate, and generally “beat the same dead horse.” This repetition of publishing the same information can serve only one purpose—to satisfy the ego of the author by keeping his name in print. Such redundancy is a poor substitute for new informative contributions—these “leaders” should quietly rest on their laurels.

WALTER E. COLE
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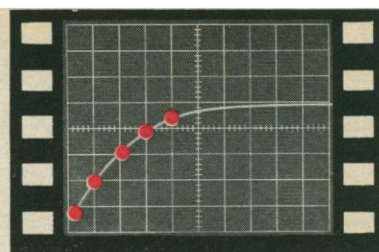
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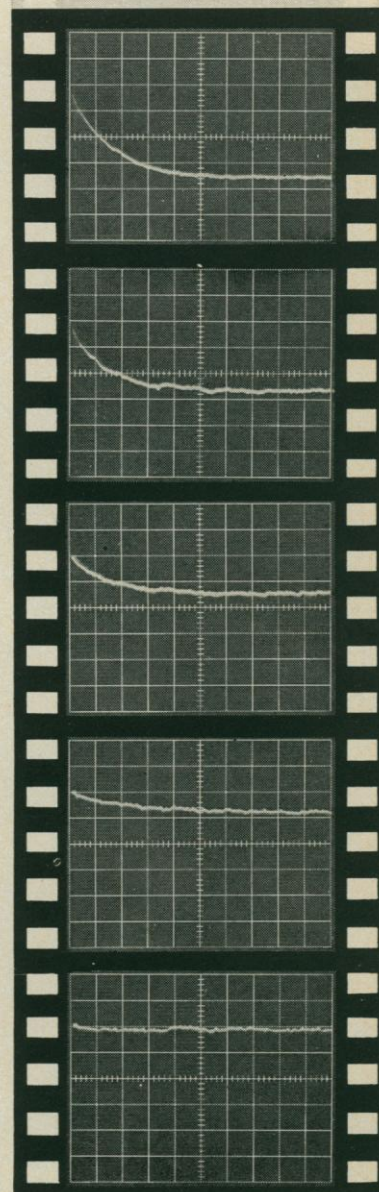
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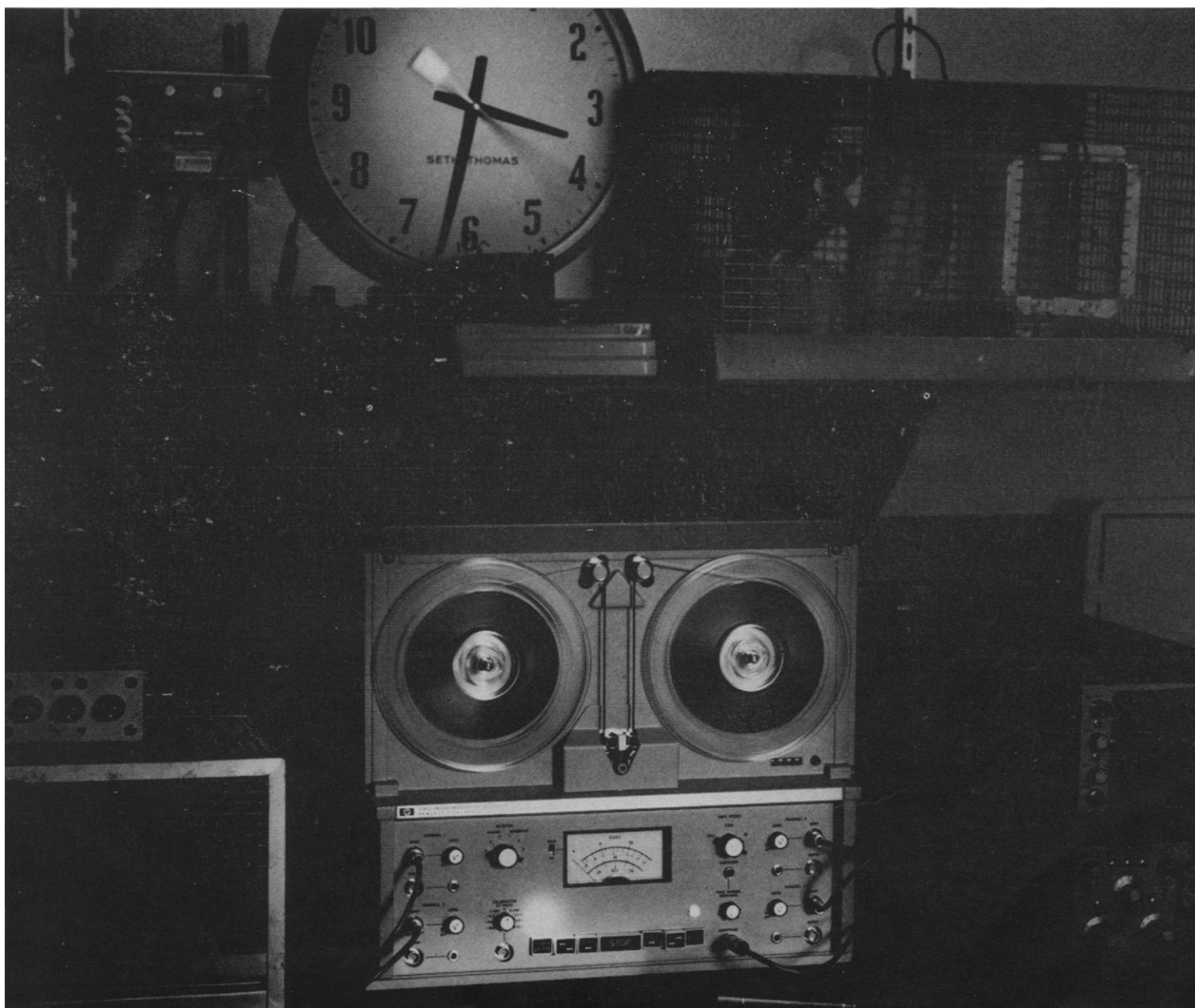
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After Earth Day

Earth Day was a start, and may have been the launching date of a lasting crusade. But what will follow? The days following religious revivals and old-fashioned Fourth of July celebrations saw many backsliders and much business as usual. Earth Day, too, may be forgotten, or ears may be dulled by overexposure and people may quit listening to the Earth Day message.

No single event will keep people listening, and the tactics that gave Earth Day its impact will wear out too soon. The Sierra Club announced *Ecotactics*, its handbook for environmental activists, as dealing with "teach-ins, attacks on giant industry pollution practices, community concern, boycotts. . . ." These are activities calculated to rouse excitement, but they are not a long-range strategy for maintaining widespread concern for environmental problems or for understanding the management alternatives.

The selection of the question "How Can Our Physical Environment Best Be Controlled and Developed?" as the topic for high school debating teams for 1970-71 may have more lasting effect. Thousands of high school debaters will learn some of the facts and fears of environmental degradation and some of the possibilities for better maintenance of our earthly resources; they will become informed advocates for Mother Earth; and they will educate the classmates and parents who attend their debates.

The better general understanding of environmental issues has also been a concern of AAAS. Articles in *Science*, symposia at annual meetings, television coverage of some of those symposia, and the activities of the Committee on Science in the Promotion of Human Welfare and the Committee on Environmental Alteration have all had this purpose.

The most recent AAAS contribution comes from the Commission on Science Education in the form of an extensive bibliography on science and society. The bibliography was compiled by one of the Commission members, John A. Moore of the University of California at Riverside. It lists some 1500 books and articles on population, food and nutrition, pollution, natural resources, and related topics. The intent of Dr. Moore and the Commission was to help high school teachers whose students want to consider some of the large problems of man's environment and the bearing of science on those problems. The idea got a ready reception. The bibliography was published by the Battelle Memorial Institute, and the first 30,000 copies are now being distributed by the National Association of Secondary School Principals to all of its members. Although the original purpose was to help high school students and teachers, the Battelle Institute and the AAAS Commission believe that scientists who are asked for advice or assistance on environmental matters will find the bibliography useful, and that it will also be useful to adult education groups and helpful in the training of future teachers. Interested individuals can secure copies by writing to the AAAS Commission on Science Education or to the Battelle Memorial Institute (501 King Street, Columbus, Ohio 43201) and asking for *Science and Society: A Bibliography*.

Earth Day was a day of excitement, indignation, and dedication. That was a start, but the problems Man has given Earth require more than a day; they need permanent attention. John Moore's bibliography is in a much lower key than a day of folk-rock music and environmental exhortation, but it is a useful contribution to the necessary strategy of keeping people listening to the true purpose of Earth Day.—DAEL WOLFLE

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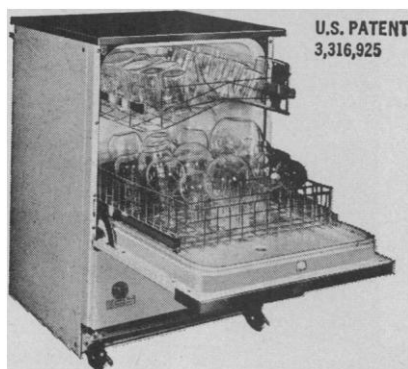
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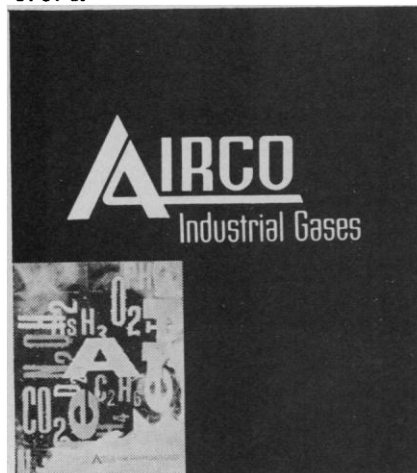
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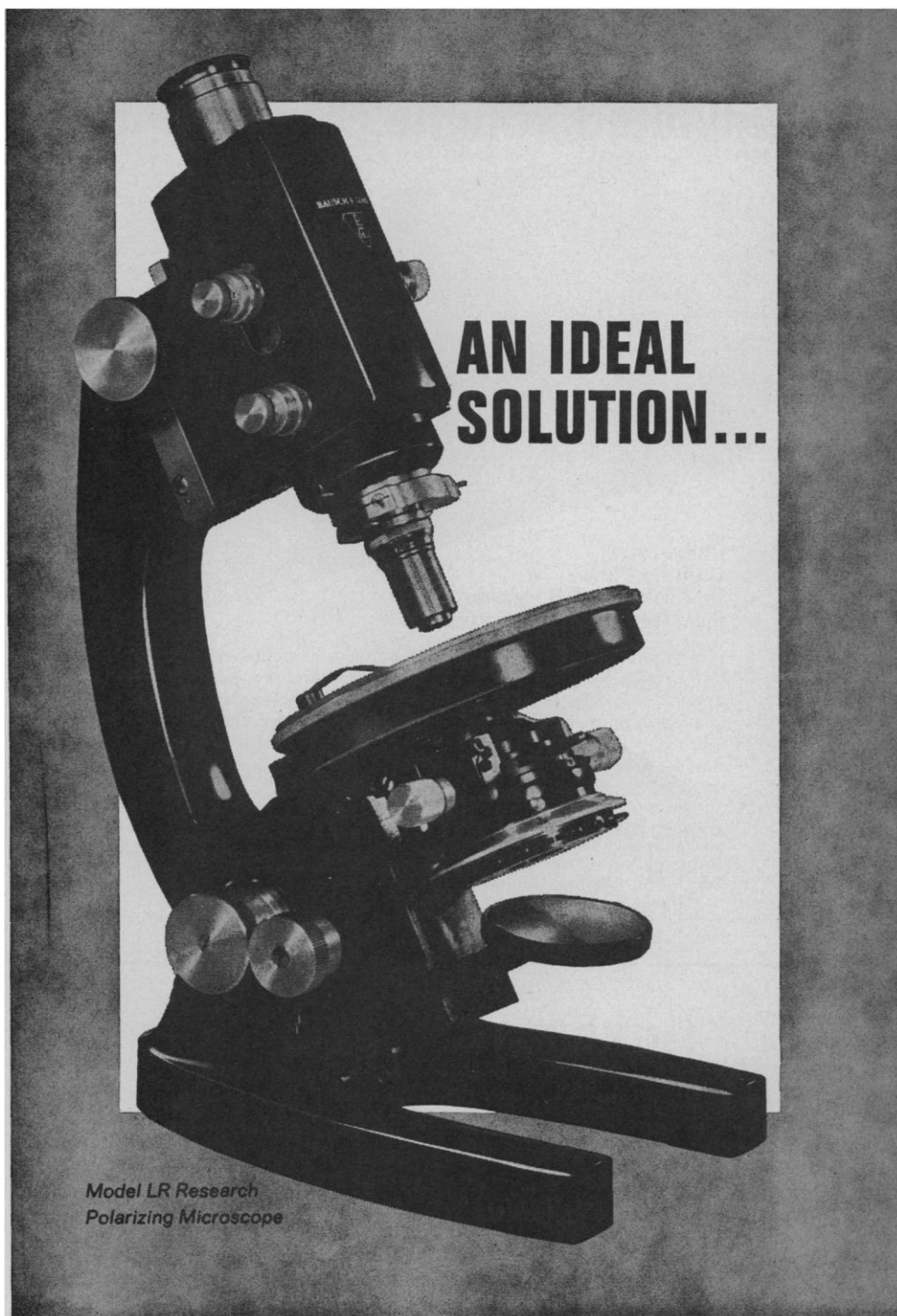
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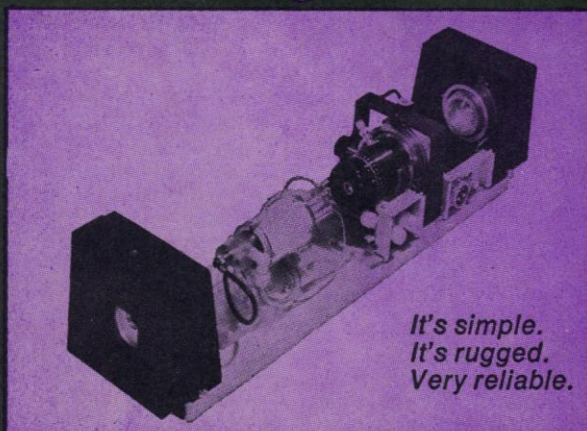
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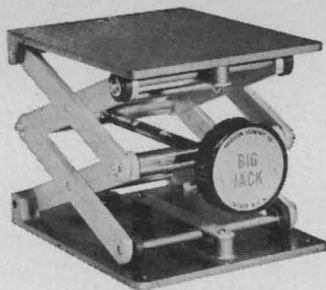
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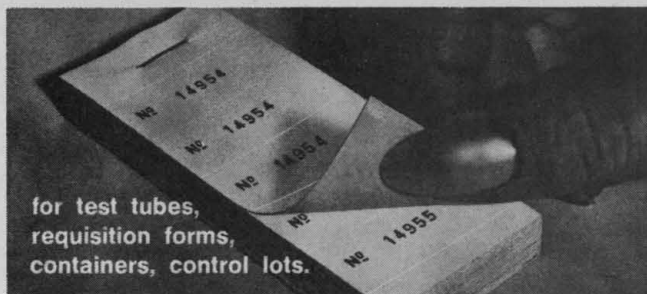


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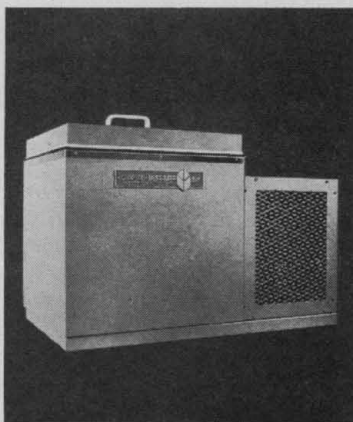
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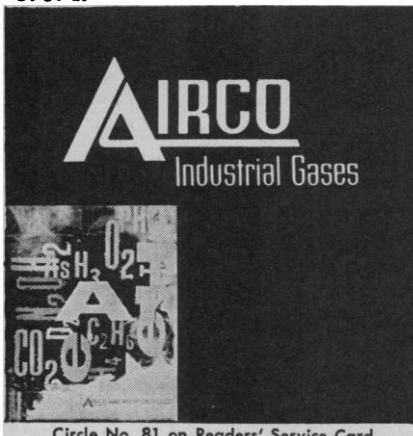
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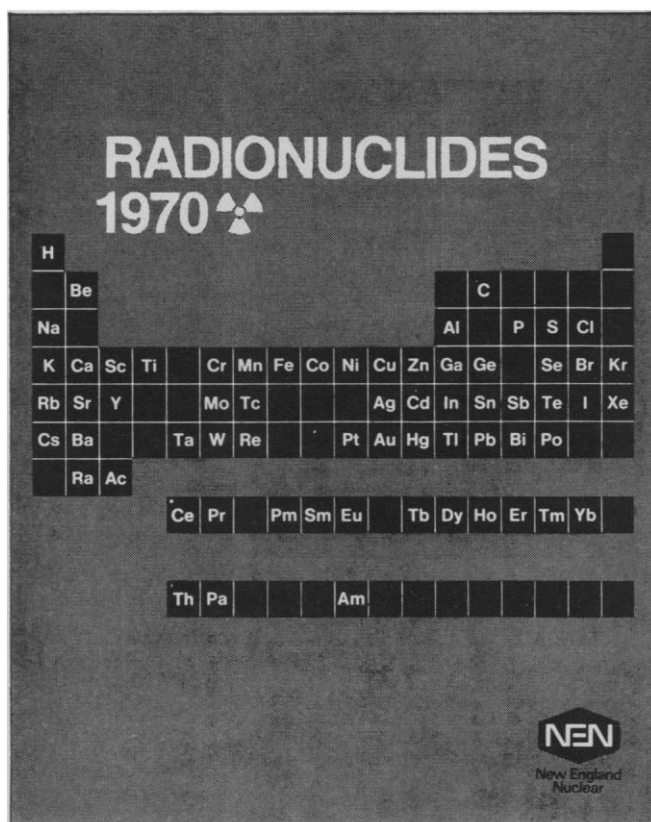
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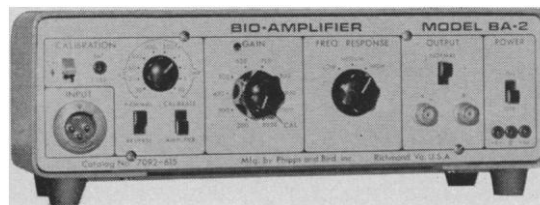
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Axiomatization of the Theory of Relativity. Hans Reichenbach. Translated from the German edition (Braunschweig, 1965) and edited by Maria Reichenbach. University of California Press, Berkeley, 1969. xxii + 210 pp., illus. \$7.95.

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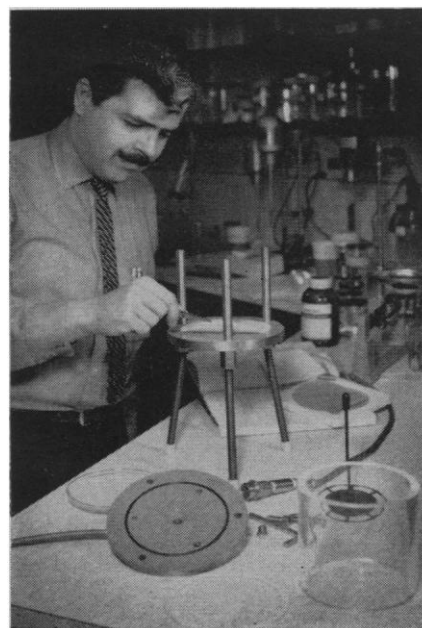
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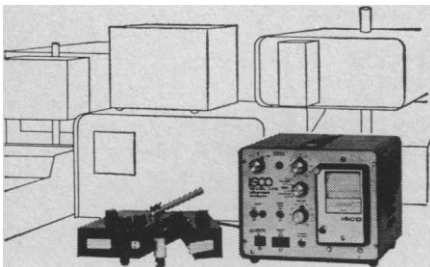
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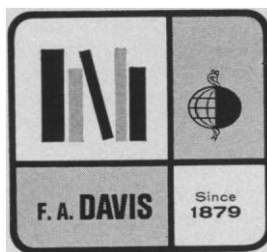
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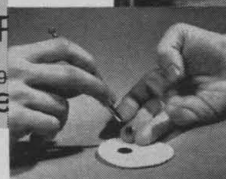
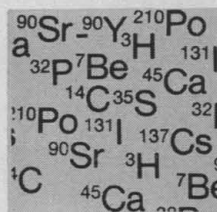
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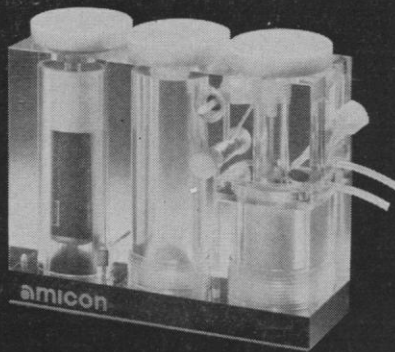
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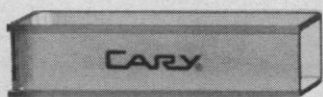
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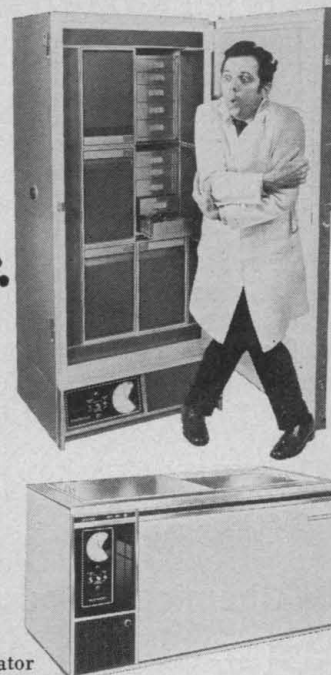
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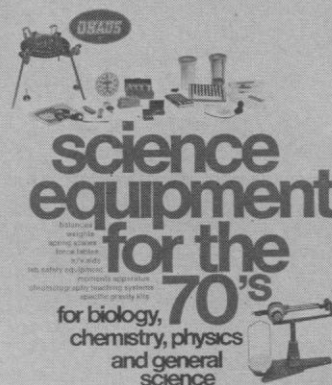
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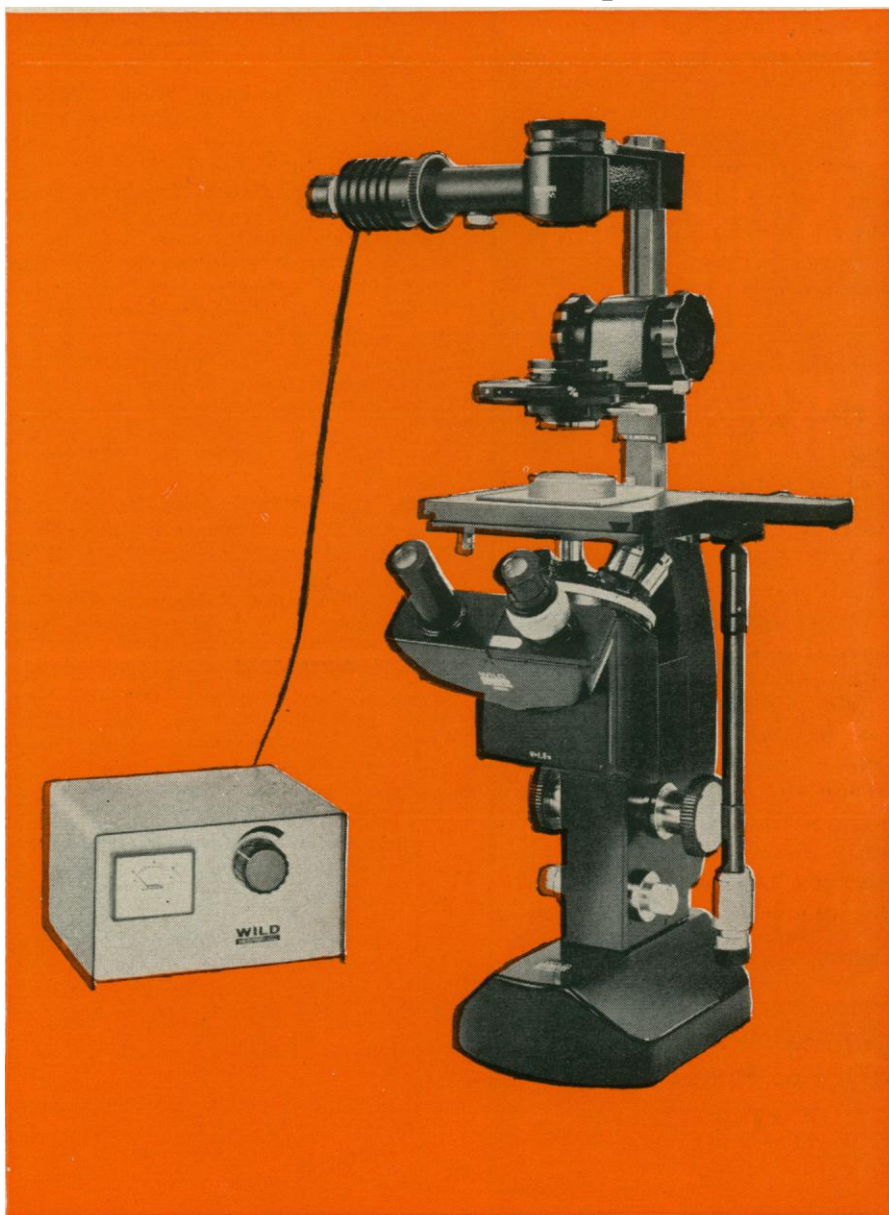
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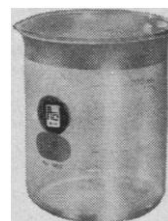
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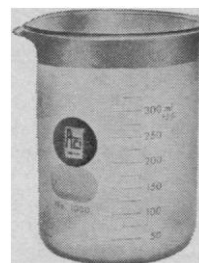
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